

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-116605

(43)Date of publication of application : 06.05.1998

(51)Int.Cl.

H01M 4/02
C23C 26/00
D01F 9/12
H01M 4/04
H01M 4/58

(21)Application number : 08-289074

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(22)Date of filing : 11.10.1996

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(54) LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE MATERIAL AND ITS MANUFACTURE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a lithium secondary battery negative electrode material and its manufacturing method in which charge and discharge capacity is large, and battery performance having excellent cycle characteristics is equipped.

SOLUTION: Lithium secondary battery negative electrode material is made of carbon material in which its carbon fiber surface is coated by the carbide of thermosetting resin, a lattice spacing (d002) value by X-ray diffraction is $d002 < 0.343\text{nm}$ at a carbon fiber portion, $d002 < 0.340\text{nm}$ at a resin carbonized portion, and weight ratios of carbon fiber and resin carbide are 1:0.5 to 2. Solution prepared by dissolving the thermosetting resin in organic solvent is impregnated into a carbon fiber sheet, is cured so as to coat the carbon fiber surface by the thermosetting resin, and the same is carbonized in temperatures from 2,000 to 3,000°C in a non-oxidizing atmosphere so as to manufacture the negative electrode material.